GS-1148L

Gigabit Switch

GS-1148L: 48-Port GbE Web Smart Switch with 4 SFP Dual Media

Key Features

- **Standard compliance**
  - ---IEEE 802.3 10Base-T Ethernet (twisted-pair copper)
  - ---IEEE 802.3u 100Base-T Ethernet (twisted-pair copper)
  - ---IEEE 802.3ab 1000Base-T Ethernet (twisted-pair copper)
  - ---IEEE 802.3z 1000Base-X Ethernet
  - ---IEEE 802.3x flow control capability
  - ---ANSI/IEEE 802.3 auto-negotiation
  - ---IEEE 802.1q VLAN
- **RoHS Compliance**

  Subscriber Interface
  - ---48 Gigabit Ethernet ports
  - ---Auto-negotiation
  - ---Auto-MDIX
  - ---Backpressure flow control for half duplex.
  - ---802.3x flow control for full duplex.
  - ---Port 45 to 48 are TP/SFP Fiber auto sense
  - ---Connector: 44 RJ-45 plus 4 TP/SFP module
- **Performance**

  Switching capacity:
  - ---48Gbps forwarding bandwidth for switch, non-blocking switch fabric and wire speed performance
  - ---8 K MAC addresses
  - ---768 KB on-chip frame buffer
  - ---Jumbo frame support up to 16K

  VLAN
  - ---Port-base VLAN
  - ---IEEE802.1q tag-base VLAN, 4094 max

  QoS
  - ---Supports packet classification by each port or vlan ACL rule
  - ---Supports four level priority queues and prioritized by Ethernet type, vlan tag, IP, UDP, TCP and flow.

  Bandwidth Control
  - ---Supports bandwidth rating that includes per port ingress and egress rate and the rate is 1% of the port speed.

  Port Trunk
  - ---Port trunking with 8 trunking groups
  - ---Up to 12 ports for each group

  Broadcast Storm
  - ---Broadcast Storm suppression

  Port Mirroring
  - ---All port support port mirroring

Benefits

- **QoS with Four Priority Queues**

  Extensive QoS features make the solution ideal for real-time applications like VoIP and IPTV. The 4 priority queues together with the Weighted Round Robin and Strict Priority scheduling techniques facilitate efficient co-existence of real-time traffic with data traffic allowing them each to meet their QoS needs. Individual users or applications can be prioritized above others using various Class of Service options by port, layer 2 priority (802.1p), Layer 3 priority (TOS or DSCP), IPv6 Traffic Class or TCP/UDP service number.

- **Enhancing Security, Traffic Flow Classification and Prioritize by Powerful ACL rule**

  Access control lists (ACLs) provide an effective means for limiting the types of traffic permitted on a network; thus enhancing security by preventing unauthorized activity. ACLs are, as the name implies, a series of lists that are processed for every frame received by the switch. Each list consists of a set of rules. Each rule is defined by a set of criteria. It is the flexibility that the switch allows in configuring these lists, rules and criteria that gives the ACLs their power.

- **Port Mirroring**

  Port mirroring copies traffic from a specific port to a target port. This mechanism helps track network errors or abnormal packet transmission without interrupting the flow of data.

- **VLAN for Performance & Security**

  The VLAN feature in the switch offers the benefits of both security and performance. VLAN is used to isolate traffic between different users and thus provides better security. Limiting the broadcast traffic to within the same VLAN broadcast domain also enhances performance.

- **Port Trunk for Bandwidth Aggregation**

  The Gigabit ports can be combined together to create a multi-link load-sharing trunk. Up to 12 Gigabit ports can be set up per trunk. The switch supports up to 8 trunking groups. Port trunks are useful for switch-to-switch cascading, providing very high full-duplex speeds.

- **Trap Event for Exception Management**

  We use SNMP Trap mechanism to inform supervisor to know the instant abnormal status of the switch.

- **4 Dual Media Ports for Flexible Fiber Connection**

  The dual media ports are provided for flexible fiber connection. You can select to install optional transceiver modules in these slots for short, medium or long distance fiber backbone attachment. Use of the SFP will disable their corresponding built-in 10/100/1000Base-T connections.

- **Build-in Web-base Management**

  Instead of using CLI interface, we provide a more convenient GUI for user. We just need to configure switch via Web Browser. It is more quickly for user to familiar the method to control switch on the basis of this design.

Overview

The 48-port Gigabit Web-Smart Switch is a highly integrated and fully featured Layer 2 Ethernet bridge with integrated MACs, packet buffers, and address tables. And it provide service layer ACL to expand your network securely or prioritize the traffic flow priority. Configuration of the switch is secured using HTTPS for Web access and SSH for Telnet access. Through the 802.1x security using a RADIUS authentication, the supervisors can specify the users whether allow accessing the secured network. In addition, the switch features comprehensive and useful function such as QoS (Quality of Service), Spanning Tree, VLAN, Port Trunking, Bandwidth Control, Port Security capability via the intelligent software. It is suitable for both metro-LAN and office application.

In this switch, Port 45~48 includes two types of media --- TP and SFP Fiber (LC, BiDi LC...); this port supports 10/100/1000 Mbps TP or 1000Mbps SFP Fiber with auto -detected function. 1000Mbps SFP Fiber transceiver is used for high-speed connection expansion.

Technical Specifications

• LED Description

	LED	Color	Function
Global	POWER	Green	-Lit when +3.3V power is coming up
Global	CPU	Green	-Blinks when CPU is active
Port 1-48	LINK/ACT	Green	-Lit when connection with remote device is good -Blinks when any traffic is present
Port 1-48	Speed	Green	-Lit Green when TP link on 1000Mbps speed -Blinks when TP link on 100Mbps speed -Off when 10Mbps or no link occur
Port 45-48	SFP	Green	-Lit when Fiber connection with remote device is good -Blinks when any traffic is present

• Network Interface

Configuration	Connector	Port
10/100/1000Mbps TP Jack (RJ-45)	TP(RJ-45)	1 to 44
10/100/1000Mbps TP Jack (RJ-45) or 1000Mbps SFP Fiber Module	TP(RJ-45) or SFP(LC/BiDi-LC)	45 to 48

• Full Forwarding Packet Rate: PPS (64 Bytes packets per second)

Forwarding Rate	Speed
14,880PPS	10Mbps
148,800PPS	100Mbps
1,488,000PPS	1000Mbps

• Hardware Spec

Feature	Detailed Description
Voltage	100~240 VAC
Frequency	50~60 Hz
Consumption	80W
Ambient Temperature	0 to 40℃
Humidity	5% to 90%
Dimensions	44(H) x 442(W) x 248.6(D) mm
Safety	Comply with FCC Part 15 Class A & CE Mark Approval

Ordering Information

GS-1148L	48-Port GbE Web Smart Switch with 4 SFP Dual Media

Optional SFP Module	
SFP.LC	1000Base-SX GE SFP Fiber Module, LC Multi-Mode 850nm
SFP.LC.M2	1000Base-SX GE SFP Fiber Module, LC Multi-Mode 1310nm 2km

Note:
We recommend the SFP transceiver from the following vendors:
1. Ruby Tech Corporation
2. Agilient Technologies
3. AVAGO Technologies
4. Finisar Corporation

Gigabit Switch

Ruby Tech Corp.
3F, No.1, Lane 50, Nan Kang Road, Sec.3, Taipei, Taiwan
TEL:886-2-2785-3961 FAX:886-2-2786-3012
http://**www.rubytech.com.tw**
E-mail : rubytech@mail.rubytech.com.tw